CLAIMS

I claim:

1. An integrated multiple-substrate-on-chip-module (MSOCM) assembly comprising:

a chip-size package (CSP)-ready MSOCM board having a top surface and a bottom surface, said CSP-ready MCM board includes a plurality of bonding-wire windows and said top surface further includes a plurality of board bonding-pads near said bonding-wire window;

an adhesive layer disposed beneath said CSP-ready MCM board having also having a plurality of bonding wire windows corresponding to and aligned with said bonding wire windows on said MCM board;

a plurality of integrated circuit (IC) chips mounted onto said adhesive layer under said bottom surface of said CSP-ready MCM board with each of said IC chips provided with a plurality of chip bonding pads facing an open space defined by said bonding wire windows; and

a plurality of bonding wires disposed in said space defined by said bonding-wire windows and interconnected between each of said chip bonding pads and a corresponding board bonding pad disposed on said top surface of said CSP-ready MCM board.

2. The MSOCM assembly of claim 1 further comprising:

said CSP-ready MSOCM board and said adhesive layer further include a plurality CSP-ready separation lines dividing each said IC chips mounted thereon.

3. The MSOCM assembly of claim 1 wherein:

said CSP-ready MSOCM board further includes a plurality of via connectors penetrating said CSP-ready MSOCM board and in electrical connection with a plurality of said chip bonding pads via metal traces disposed on said bottom surface of said MSOCM board; and

each of said via connectors further being in electric connection with a land grid array disposed on said top surface of said MSOCM board.

4. The MSOCM assembly of claim 4 wherein:

said land grid array comprising a plurality of CSP-ready connection solder pads insulated by a plurality of solder masks.

5. The MSOCM assembly of claim 1 further comprising:

a plurality of solder balls mounted on a plurality of said CSP-ready solder pads on said top surface of said CSP ready MSOCM board.

6. The MSOCM assembly of claim 1 further comprising:

a plurality of testing pins including a set of burn-in test pins and a set of board level test pins disposed on an edge of said CSP-ready MCM board provided for conducting a plurality of burn-in and board level tests.

add A27